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(54) **STRUCTURAL GLAZING WEATHER SEAL WITH CAPTURED GLAZING OPTION**

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(51) **Int. Cl.**

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| ***E04B 2/96*** | (2006.01) |
| ***E06B 1/18*** | (2006.01) |
| ***E06B 3/64*** | (2006.01) |
| ***E06B 1/40*** | (2006.01) |
| ***E06B 3/26*** | (2006.01) |
| ***E06B 3/54*** | (2006.01) |
| ***E06B 1/36*** | (2006.01) |

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USPC ..... 52/235, 302.3, 200, 474, 204.591

See application file for complete search history.

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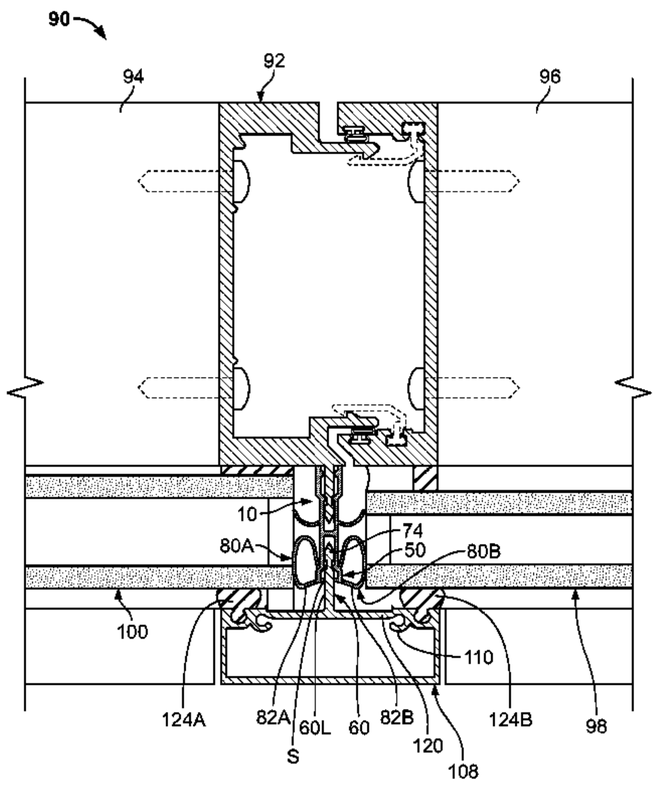
(57) **ABSTRACT**

A weather seal that inserts into a gap between glazing panels has an H-shape with a snap-on female receiver at either end for receiving a tongue extending from a structure at one end and a cap tongue in the other. A web extending between a pair of walls provides a weather barrier and allows the walls to flex enabling the snap-on action. A pair of sealing fins and a pair of bulbs extend laterally from the H-shape, bridging the gap to exclude weather infiltration. The second receiver is covered by extensions joined at a slit permitting the weather seal to be used without a cap. Alternatively, the cap may be affixed to the weather seal by pushing a cap tongue through the slit and into engagement with the second receiver.

**17 Claims, 4 Drawing Sheets**



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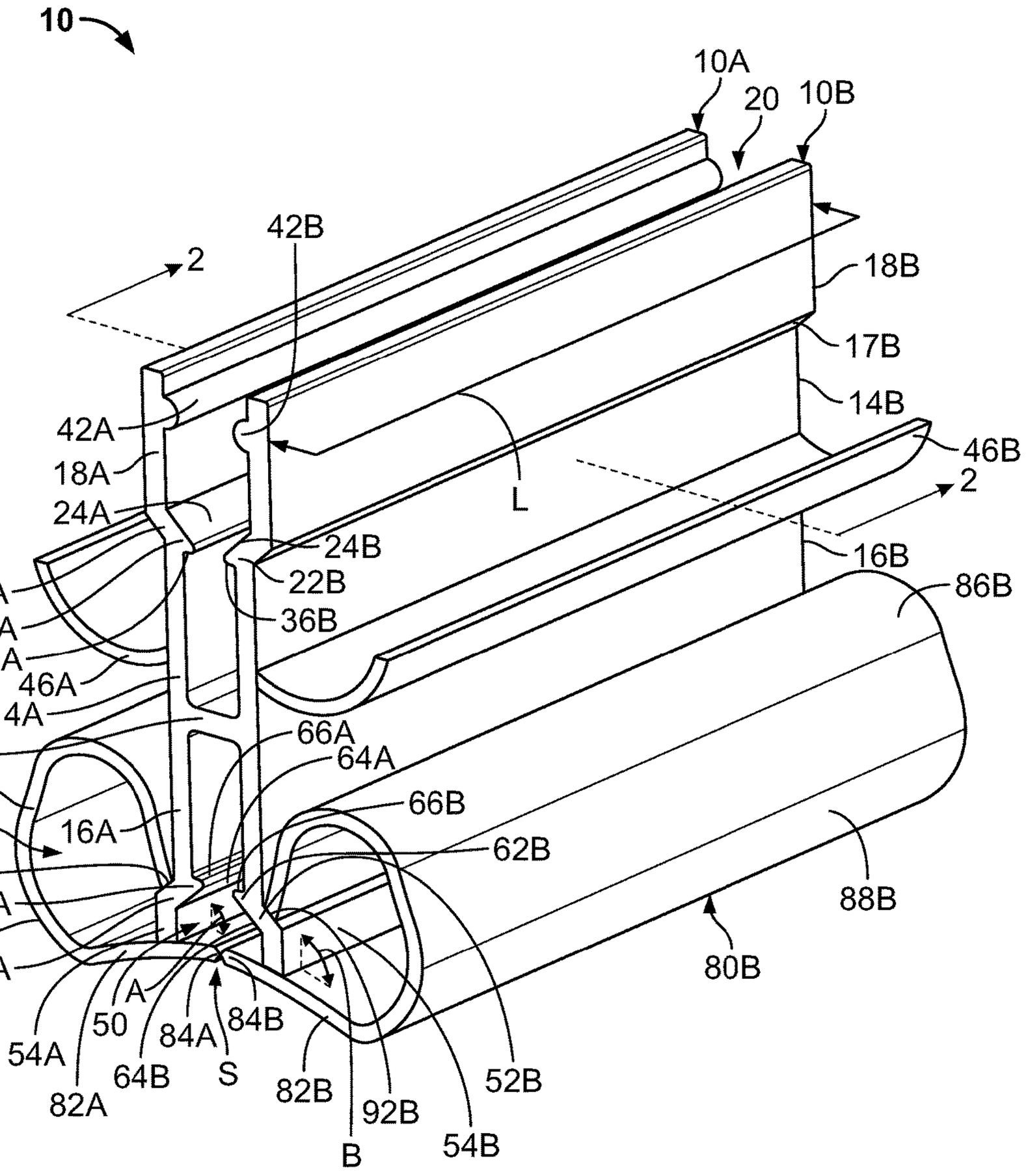
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10A
20
10B
42B
2
18B
17B
14B
46B
42A
18A
24A
L
2
24B
16B
17A
22B
86B
22A
36B
36A
46A
14A
66A
12
64A
86A
66B
80A
16A
62B
92A
88B
62A
88A
80B
52A
A
50
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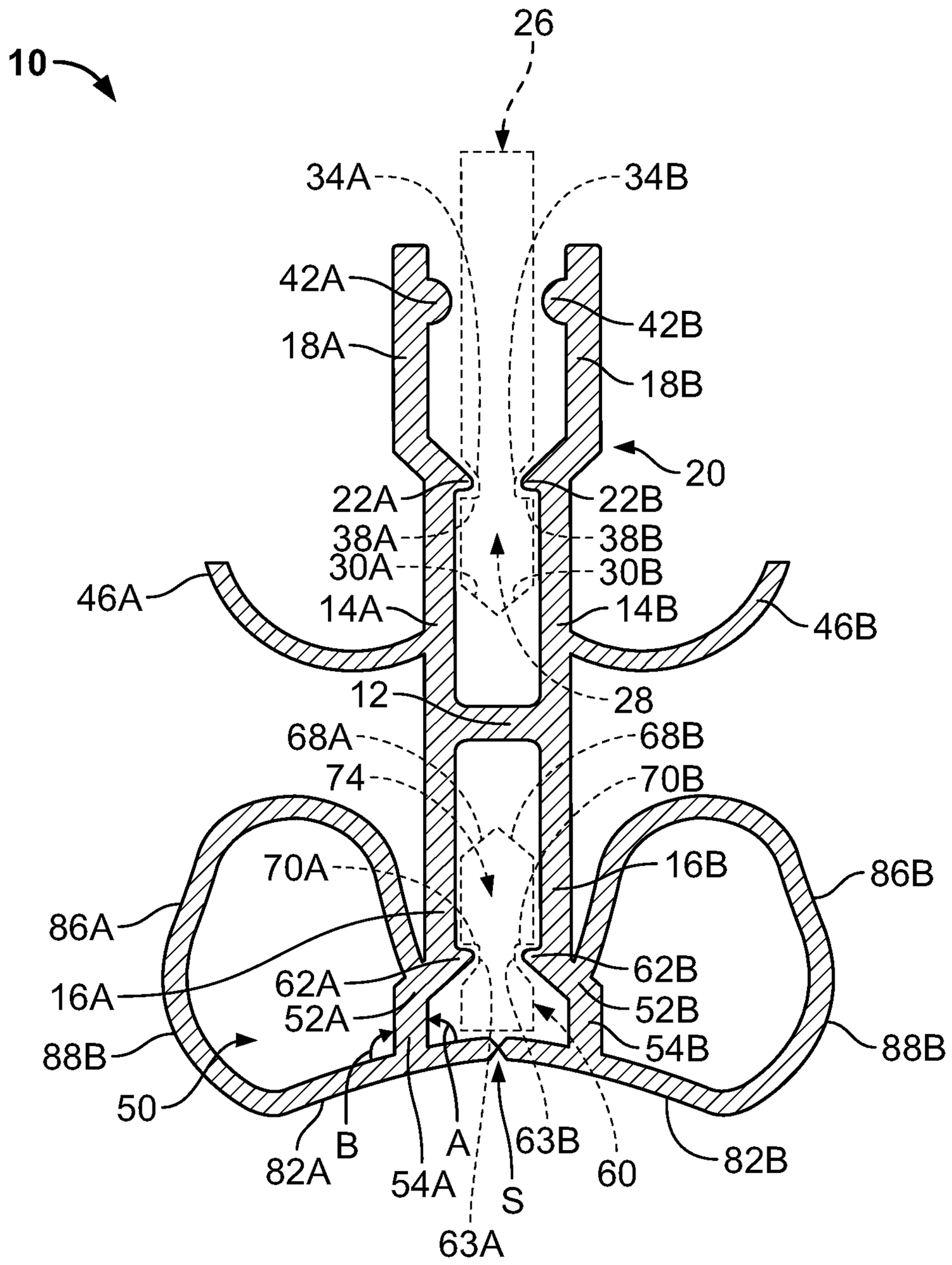
92B
B
54B

FIG. 1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26
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34B
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18A
18B
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22A
22B
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14B
46B
12
28
68A
68B
74
70B
70A
16B
86B
86A
16A
62A
62B
52A
52B
54B
88B
88B
50
82A
B
54A
A
S
63A
63B
60
82B

FIG. 2

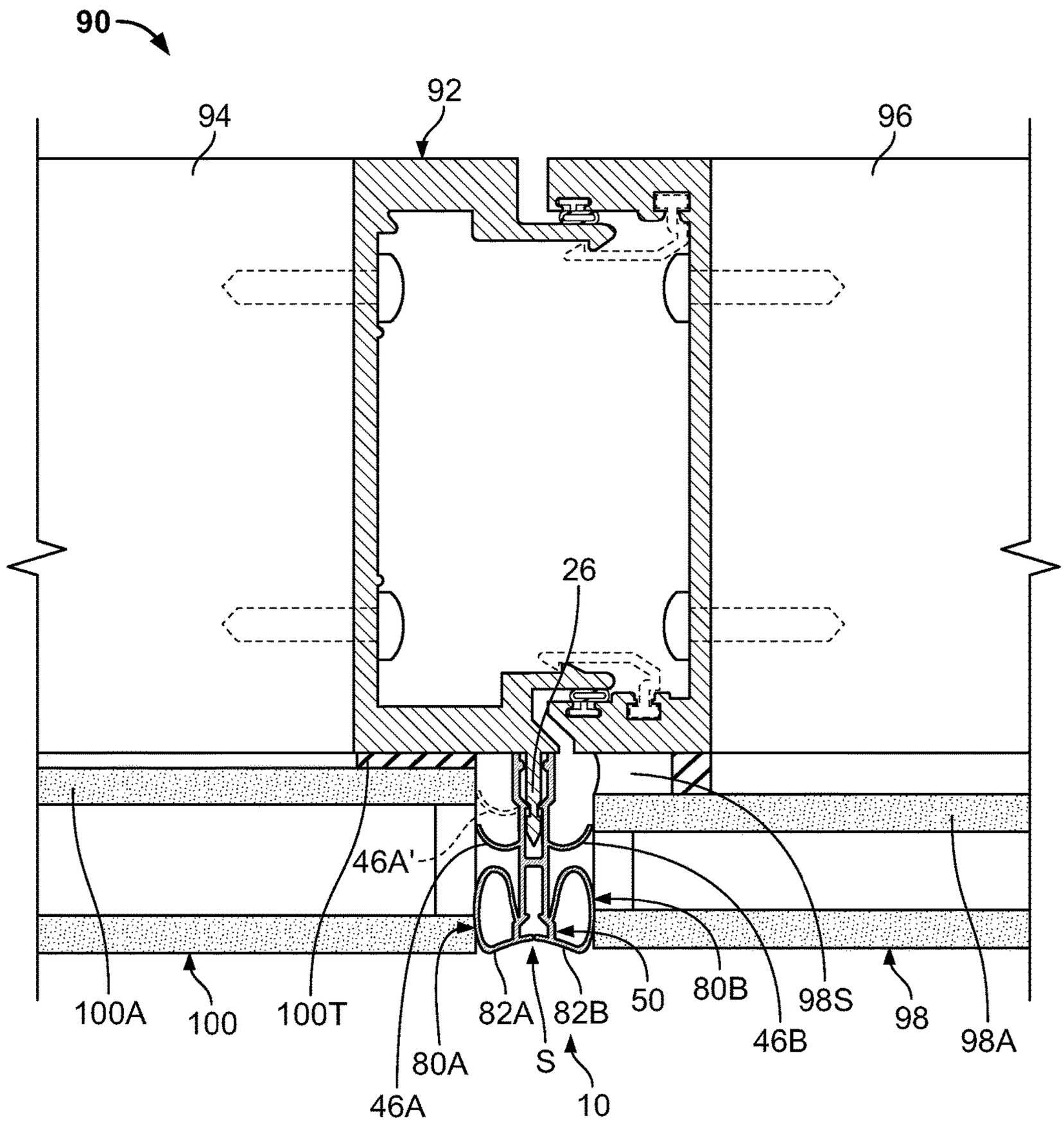
90
92
94
96
26
46A'
100A
100
100T
82A
82B
50
80B
98S
98
98A
46B
80A
S
46A
10

FIG. 3

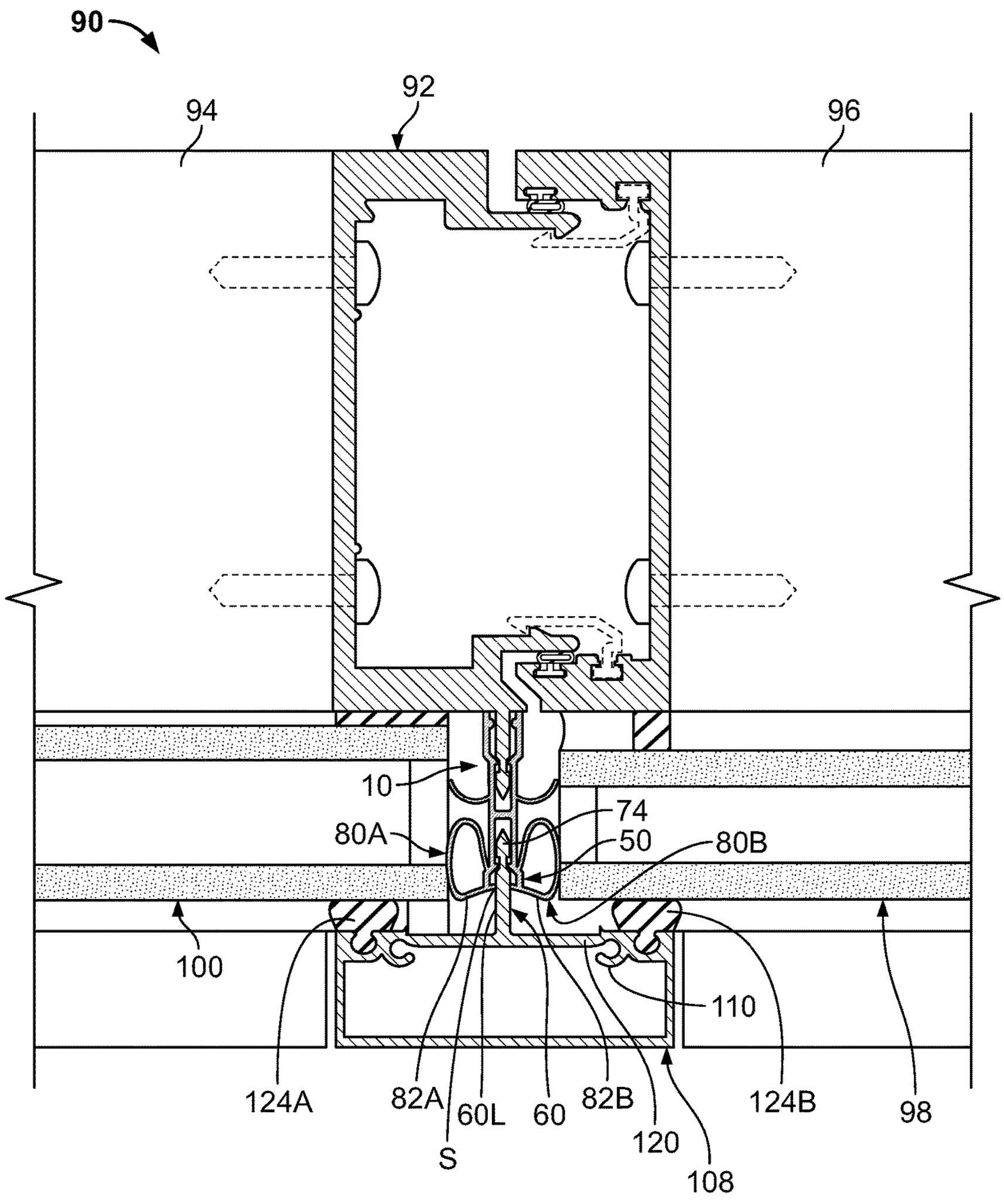
90
92
94
96
10
74
80A
50
80B
100
110
124A
82A
60L
60
82B
124B
98
S
120
108

FIG. 4

# STRUCTURAL GLAZING WEATHER SEAL WITH CAPTURED GLAZING OPTION

## FIELD

The present invention relates to apparatus and methods for sealing joints between adjacent glazing panels of a glazed panel wall construction on the exterior of a building, such as a curtain wall, storefront or the like, and more particularly, to a pre-formed seal.

## BACKGROUND

Various apparatus and methods for establishing a seal between glazing panels are known. Typically, two-sided silicone structural glazing (SSG) is sealed with a wet-type seal, e.g., a silicone seal that is applied in a flowable state and that subsequently cures to a non-flowable state. Pre-formed gaskets are known that install between adjacent glass panels. For example, U.S. Pat. No. 5,245,808 discloses a weather seal retainer for structural glazing. A pre-formed gasket is also known that may be inserted between glazing panels, see PG123™ wall system from Kawneer, http://www.kawneer.com. Notwithstanding, alternative apparatus and methods for sealing glazing panels remain desirable.

## SUMMARY

The disclosed subject matter relates to a weather seal for a gap between adjacent glazing panels held to a structure, having: a first wall along the length of the weather seal; a first coupling disposed along a first side of the first wall, the first coupling attaching to the structure between the gap; a second coupling disposed along a second side of the first wall distal to the first side, the second coupling capable of selectively attaching to a cap covering the joint; at least one seal member extending from the first wall intermediate the first coupling and the second coupling, the seal member at least partially bridging the gap.

In another embodiment, the first coupling is a first receiver and the structure has a tongue that inserts into the first receiver.

In another embodiment, further including a second wall extending next to the first wall along the length of the first wall, the first wall and the second wall joined by a web.

In another embodiment, the at least one seal member includes a first fin and a second fin, the first fin extending from the first wall in a direction perpendicular thereto and distal to the second wall, the second fin extending from the second wall in a direction perpendicular thereto, and distal to the first wall.

In another embodiment, the at least one seal member further includes at least one sealing bulb, the sealing bulb having a hollow therein and capable of deforming when pressed into the gap.

In another embodiment, the at least one sealing bulb includes a first sealing bulb and a second sealing bulb, the first sealing bulb extending from the first wall in a direction perpendicular thereto and distal to the second wall, the second sealing bulb extending from the second wall in a direction perpendicular thereto, and distal to the first wall.

In another embodiment, the first sealing bulb and the second sealing bulb have a cross-section approximating an egg shape, with a first portion having a smaller diameter than a second portion, the first portions leading the first and second sealing bulbs into the gap before the second portions when the weather seal is installed in the gap.



In another embodiment, the second coupling is a second receiver and further including an extension from a wall of each of the sealing bulbs, the extensions extending in a direction toward one another to define a split over the second receiver.

In another embodiment, the weather seal is made from an elastic material, the first receiver capable of deforming to a first position capable of receiving the tongue of the structure and resiliently returning to a second position interlocking with the tongue of the structure.

In another embodiment, further including a first pair of inwardly directed prominences proximate the first receiver, a first prominence of the first pair extending from the first wall toward the second wall and a second of the first pair extending from the second wall toward the first wall, wherein the tongue of the structure has recesses on opposing sides thereof, the pair of prominences extending into the recesses when the tongue of the structure is inserted into first receiver in snap-fit relationship.

In another embodiment, further including an elongated cap capable of covering the gap, the cap having a front wall with a tongue extending therefrom, wherein, the second receiver is capable of deforming to a first position receiving the tongue of the cap and resiliently returning to a second position interlocking with the tongue of the cap and further including a second pair of inwardly directed prominences proximate the second receiver, a first prominence of the second pair extending from the first wall toward the second wall and a second prominence of the second pair extending from the second wall toward the first wall, wherein the tongue of the cap has recesses on opposing sides thereof, the second pair of prominences extending into the recesses in the tongue of the cap when the tongue of the cap is inserted into the second receiver in snap-fit relationship.

In another embodiment, the extensions form a shallow V shape in cross-section, the slit at the nadir of the V shape and disposed over and in alignment with the second receiver.

In another embodiment, further including a pair of inwardly extending guide beads in the first receiver for controlling the frictional interaction of the receiver with the tongue of the structure.

In another embodiment, a glazing structure includes: a glazing support member with a coupling member extending there from; a pair of glazing panels attached to the glazing support member with a gap there between; a weather seal inserted into the gap bridging between the pair of glazing panels, the weather seal having a first wall along the length thereof with a first coupling disposed along a first side, the first coupling attaching to the coupling member between the gap, a second coupling disposed along a second side of the first wall distal to the first side and a seal member extending from the first wall to at least one of the glazing panels.

In another embodiment, the first coupling and the second coupling are first and second receivers and the coupling member is a tongue that inserts into the first receiver, the weather seal further including a second wall extending next to the first wall along the length of the first wall, the first wall and the second wall joined by a web forming an H-shape in cross-section, wherein the seal member includes a pair of sealing fins, a first fin extending from the first wall in a direction perpendicular thereto and distal to the second wall, a second fin extending from the second wall in a direction perpendicular thereto, and distal to the first wall, and further comprising a pair of sealing bulbs having a hollow therein and capable of deforming when pressed into the gap, a first of the pair of sealing bulbs extending from the first wall in a direction perpendicular thereto and distal to the second

wall, the second sealing bulb extending from the second wall in a direction perpendicular thereto, and distal to the first wall.

In another embodiment, the first sealing bulb and the second sealing bulb have a cross-section approximating an egg shape, with a first portion having a smaller diameter than a second portion, the first portions leading the first and second sealing bulbs into the gap before the second portions when the weather seal is installed in the gap, further including an extension from a wall of each of the sealing bulbs, the extensions extending in a direction toward one another and meeting to define a split over the second receiver.

In another embodiment, further including an elongated cap capable of covering the gap, the cap having a front wall with a tongue extending therefrom, the tongue of the cap being received in snap-fitting relationship into the second receiver.

In another embodiment, a method for sealing a gap between glazing panels, includes the steps of: providing a structure for supporting at least two glazing panels adjacent to each other with a gap between, the structure having a coupling member extending into the gap; providing an elongated weather seal having a first coupling disposed along a first longitudinal side and a second coupling disposed along a second longitudinal side and a seal member extending in a generally perpendicular direction relative the length of the weather seal, the weather seal having a penetrable barrier covering the second coupling; inserting the weather seal into the gap; coupling the first coupling of the weather seal to the coupling member of the structure, weather seal being held in position in the gap with the seal member at least partially bridging a width of the gap.

In another embodiment, further including the steps of providing an elongated cap with a front wall with a tongue extending therefrom; pushing the tongue of the cap into the second receiver; interlocking the tongue of the cap with the second receiver.

In another embodiment, further including the step of penetrating the penetrable barrier of the weather seal prior to the step of pushing and deforming the second receiver prior to the step of interlocking.

## BRIEF DESCRIPTION OF THE DRAWINGS

For a more complete understanding of the present disclosure, reference is made to the following detailed description of exemplary embodiments considered in conjunction with the accompanying drawings.

FIG. **1** is a perspective view of a weather seal in accordance with an embodiment of the present disclosure.

FIG. **2** is a cross-sectional view of the weather seal of FIG. **1**, taken along section line **2-2** and looking in the direction of the arrows.

FIG. **3** is cross-sectional view of a glazing support structure and glazing panels on which the weather seal of FIGS. **1** and **2** is installed.

FIG. **4** is a cross-sectional view of the structure of FIG. **3**, further including a cap.

## DETAILED DESCRIPTION OF EXEMPLARY EMBODIMENTS

An aspect of the present disclosure is the recognition that it would be beneficial to have a preformed weather seal for sealing a joint between adjacent glazing units that allows a cap structure to be attached to the joint at a predetermined relative position, e.g., parallel to and centered over the jot and without use of a flowable (liquid) sealant, such as silicone seal to attach the cap.

An aspect of the present disclosure is to provide a multi-function rain screen gasket. In one embodiment, the rain screen gasket includes a resiliently flexible front face and resiliently flexible back fins to provide two mechanisms to resist water penetration. In an embodiment, the rain screen gasket includes at least two retainer snaps, an interior retainer snap, which fixes the gasket to the face of a mullion, i.e., between two glass lites (glazing panels), and an exterior retainer snap to fix an exterior cover to the gasket for aesthetic and sealing purposes.

According to aspects of the present disclosure, an assembly is disclosed that allows the window wall glazing system or curtain wall glazing system to perform whether the exterior cover is present or not. According to aspects illustrated herein, in one embodiment, a window wall glazing system or curtain wall glazing system includes at least two insulating glass units, at least two methods for fixing glass lites of the insulating glass units in place on both sides of a mullion (SSG or tape applied), and at least one rain screen gasket for providing a rain screen seal between the glass lites or panels against water/weather penetration.

FIGS. **1** and **2** show a weather seal **10** in accordance with an embodiment of the present disclosure. In one embodiment, the weather seal **10** is bilaterally symmetric with two portions **10**A and **10**B conjoined by a bridging web **12**. The web **12** serves to connect portions **10**A and **10**B and also to act as a weather seal. The length L of the weather seal **10** may approximate the length of the glazing panels between which it is inserted and may extend beyond a glazing panel to bridge the space between the next set of adjacent glazing panels, e.g., above and below the panels between which it is inserted. In one alternative, the weather seal **10** may be of a length L to extend the length of a plurality of glazing panels and/or may be cut to length at the time of use.

Each of portions **10**A and **10**B have a first wall **14**A, **14**B and a second wall **16**A, **16**B extending away from the web **12** and forming an H shaped cross-sectional shape. Short, angled flare walls **17**A, **17**B result in first end walls **18**A, **18**B being laterally, outwardly offset from first walls **14**A, **14**B to form a receiver **20**. Proximate the flare walls **17**A, **17**B, inwardly directed prominences **22**A, **22**B extend. The prominences **22**A, **22**B have sloped inner surfaces **24**A, **24**B that serve as guides to introduce a tongue **26** there between. The tongue **26** may be provided with a tip **28** having sloped surfaces **30**A, **30**B that encounter and slide over the prominences **22**A, **22**B in wedging fashion when the tongue **26** is inserted into the receiver **20**. The weather seal **10** may be formed from an elastic polymer, such as polypropylene, TPV, santoprene, polyamide or PVC, which may be extruded to form the weather seal **10**. The elasticity of the weather seal **10** allows the receiver **20** is spread apart when the tip **28** of the tongue **26** is pressed past the prominences **22**A, **22**B. The tongue **26** has recesses **34**A, **34**B that receive the prominences **22**A, **22**B, allowing the receiver **20** to assume a relaxed position with interior flat surfaces **36**A, **36**B of the prominences **22**A, **22**B abutting flat surfaces **38**A, **38**B of the recesses **34**A, **34**B and locking the tongue **26** in the recess **34**A, **34**B. Inwardly directed guide beads **42**A, **42**B provide centering of the tongue **26** as it is introduced into and held in the receiver **20**. The guide beads **42**A, **42**B also provide a frictional interaction of predetermined magnitude between the tongue **26** and the weather seal **10** that aids in holding the weather seal **10** in position on the tongue, but that does not impede installation or repositioning of the weather seal **10**.

Each of the portions **10**A, **10**B have a sealing fin **46**A, **46**B extending outwardly therefrom at an intermediate position, e.g., proximate web **12**. As shown in FIG. **3**, the sealing fins **46**A, **46**B create an inboard seal as a second line of defense for water penetration, e.g., by resiliently pressing against an inboard glazing panel member **98**A, **100**A when the weather seal **10** is inserted between glazing panels **98**, **100**. The sealing fins **46**A, **46**B may have an arcuate cross-sectional shape to increase the flexibility thereof to allow for assembly and material tolerance. In one embodiment, the sealing fins may curve in the opposite direction. The weather seal **10** has a second receiver **50** distal to the receiver **20**, at the end of second walls **16**A, **16**B, that is defined by flared walls **52**A, **52**B and end walls **54**A, **54**B. The receiver **50** receives a cap tongue **60** that extends from a cap **108**, as shown in FIG. **4**. As with the first receiver **20**, receiver **50** has a pair of inwardly directed prominences **62**A, **62**B that may be received in recesses **63**A, **63**B in the cap tongue **60**. Sloped surfaces **64**A, **64**B, **68**A, **68**B, flat surfaces **66**A, **66**B and flat surfaces **70**A, **70**B of tip **74** perform the same functions as explained above relative to sloped surfaces **24**A, **24**B, **30**A, **30**B, flat surfaces **36**A, **36**B and flat surfaces **38**A, **38**B of tip **28**. As with the receiver **20**, receiver **50** can deform to receive the tip **74** and then return to a relaxed position, gripping the tip **74** and preventing its withdrawal from the receiver **50**.

Portions **10**A, **10**B also feature sealing bulbs **80**A, **80**B that extend from the end walls **54**A, **54**B. The sealing bulbs **80**A, **80**B are generally oval in cross section. The oval shapes may be modified by substantially flat portions **82**A, **82**B that join end walls **54**A, **54**B at an acute interior angle A and an obtuse exterior angle B. In one embodiment, angles A and B may both be close to 90 degrees. The flat portions **82**A, **82**B have ends **84**A, **84**B that approach and optionally touch one another, leaving a split S and covering the receiver **50** when in a relaxed position. The oval shape of the sealing bulbs **80**A, **80**B may also be modified by narrowed interior portions **86**A, **86**B that ease entry of the sealing bulbs **80**A, **80**B into the gap between adjacent glazing panels **98**, **100**. Bulging portions **88**A, **88**B insure the sealing bulbs **80**A, **80**B extend across and seal the gap between glazing panels **98**, **100**. The sealing bulbs **80**A, **80**B may be closed, with ends **92**A, **92**B monolithically extending from the receiver **50** (at or proximate to the flare walls **52**A, **52**B), increasing the rigidity of the sealing bulbs **80**A, **80**B. Alternatively, the ends **92**A, **92**B may be formed independently of and abut against the flare walls **52**A, **52**B, decreasing the rigidity of the sealing bulbs **80**A, **80**B.

FIGS. **3** and **4** show a glazed structure **90** with structural members **92**, **94**, **96** and glazing panels **98**, **100**. The glazing panels **98**, **100** shown are of different thicknesses and are held to the structural members **92** (a vertical mullion with a composite construction), **94**, **96** (horizontal mullions) by different means. In actual use, only one type of glazing panel and attachment approach would typically be used for a particular application. FIGS. **3** and **4** illustrate, however, that the weather seal **10** may be used in a range of applications. Glazing panel **98** is adhered to the structural members **92**, **94**, **96** by structural silicone glazing (SSG) techniques and materials, which are known in the art and are indicated by the silicone seal **98**S. Glazing panel **100** is adhered to the structural members **92**, **94**, **96** by structural tape glazing techniques and materials, which are also known in the art and are indicated by the structural tape **100**T. The weather seal **10** is inserted between the adjacent glazing panels **98**, **100** after they are attached to the structural members **92**, **94**, **96**, spanning the gap there between and reducing or excluding weather infiltration in the form of precipitation and ambient air and radiation. As noted above, weather seal **10** locks on the tongue **26** extending from the structural member **92**. The weather seal **10** may be used to seal horizontal gaps between adjacent glazing panels like **98**, **100** in a manner similar to the sealing of a vertical gap, as shown. An alternative position for a sealing fin **46**A' may be employed to allow the fin **46**A' to seal against another portion of the glazing panel **100** (e.g., the inner glass **100**A). As a further alternative, the weather seal **10** may be provided with a plurality of sealing fins **46**A, **46**B, e.g., two or three on each side, to be able to adapt to a variety of applications. As shown in FIG. **3**, the flat surfaces **82**A, **82**B of the sealing bulbs **80**A, **80**B define a shallow V shape with a split S at the bottom of the V. The shallow V shape induces an approaching cap tongue **60** (FIG. **2**, FIG. **4**) to move toward and through the split S and into alignment with the receiver **50**.

FIG. **4** shows a cap **108**, e.g., made from a metal, such as an aluminum alloy. In one alternative, the cap **108** may be made from one or a combination of an aluminum alloy and a polymer, such as polypropylene, TPV, santoprene, polyamide or PVC. In one embodiment, the cap **108** may be produced by extrusion and has a generally rectangular cross-section. Strengthening ribs **110** may be used to increase rigidity. A cap tongue **60** with a tip **74**, recesses **63**A, **63**B (FIG. **2**) and lower portion **60**L extends from a front wall **120** of the cap **108**. As described in reference to FIG. **2**, the tip **74** may be inserted into the second receiver **50** and interlock with the weather seal **10** preventing withdrawal therefrom. The weather seal **10** provides a sealing function as well as a cap **108** installation and retention function. The lower portion **60**L extends through the slit S, pushing the sealing bulbs **80**A, **80**B into closer engagement with the glazing panels **98**, **100**. The cap may include gaskets **124**A, **124**B that intermediate between the cap **108** and the glazing panels **98**, **100**, as well as providing an additional weather seal.

A weather seal **10** is disclosed herein which incorporates the benefits of a preformed gasket used in SSG conditions along with cap attachment features. The attachment features are concealed behind the exterior surface of the weather seal **10**. This dual functionality provides a single seal system that can optionally be used to achieve the aesthetic and functional effects of either a flush SSG system or a captured system. The weather seal **10** allows for positive engagement of the cap **108** by splitting along the face of the weather seal **10** during attachment of the cap **108**, which then snaps into place in the receiver **50**. The positive engagement of the cap **108** with the weather seal **10** eliminates the structural silicone seal otherwise needed to affix the cap **108** to adjacent glazing panels. The weather seal **10** assures accurate alignment and positioning relative to the glazing panels **98**, **100**.

It will be understood that the embodiments described herein are merely exemplary and that a person skilled in the art may make many variations and modifications without departing from the spirit and scope of the claimed subject matter. For example, while the receivers **20**, **50** are shown as female coupling devices that receive a male tongue **26**, **60** extending from the structure **92** and the cap **108**, this relationship could be reversed in one or both instances. For example, the tongue **26** could have a slot therein into which a male tongue extending from the weather seal **10** is inserted and snap-locked into place. Similarly, the weather seal could have a second male tongue that inserts into a slot formed in the cap **108** at the position where the male tongue **60** is situated in the illustrated embodiments. All such variations

and modifications are intended to be included within the scope of the appended claims.

We claim:

**1**. A weather seal for a gap between adjacent side edges of first and second co-planar glazing panels held to a structure, comprising:

a first wall along the length of the weather seal;

a second wall extending next to the first wall along the length of the first wall;

a web wall joining the first wall and the second wall, the first wall and the second wall spaced one from another;

a first coupling disposed along a first side of the first wall and the second wall, the first coupling attaching to the structure between the gap;

a second coupling disposed along a second side of the first wall and the second wall distal to the first side, the second coupling capable of selectively attaching to a cap covering the joint;

a first seal member extending from the first wall in a direction distal to the second wall and intermediate the first coupling and the second coupling;

a second seal member extending from the second wall in a direction distal to the first wall and intermediate the first coupling and the second coupling; the weather seal bridging the gap with the first seal member contacting a side edge of the first glazing panel and the second seal member contacting a side edge of the second glazing panel, wherein the first seal member is a flexible arcuate fin and the second seal member is a flexible arcuate fin, the first seal member contacting the side edge of the first glazing panel proximate an end of the first seal member and the second seal member contacting the side edge of the second glazing panel proximate an end of the second seal member.

**2**. The weather seal of claim **1**, wherein the first coupling is a first receiver and the structure has a tongue that inserts into the first receiver.

**3**. The weather seal of claim **1**, further comprising at least one sealing bulb extending from the first wall proximate the second coupling, the sealing bulb having a hollow therein and capable of deforming when pressed into the gap.

**4**. The weather seal of claim **3**, wherein the at least one sealing bulb includes a first sealing bulb and a second sealing bulb, the first sealing bulb extending from the first wall in a direction perpendicular thereto and distal to the second wall, the second sealing bulb extending from the second wall in a direction perpendicular thereto, and distal to the first wall.

**5**. The weather seal of claim **4**, wherein the first sealing bulb and the second sealing bulb have a cross-section approximating an egg shape, with a first portion having a smaller diameter than a second portion, the first portions leading the first and second sealing bulbs into the gap before the second portions when the weather seal is installed in the gap.

**6**. A weather seal for a gap between adjacent side edges of first and second co-planar glazing panels held to a structure, comprising:

a first wall along the length of the weather seal;

a second wall extending next to the first wall along the length of the first wall;

a web wall joining the first wall and the second wall, the first wall and the second wall spaced one from another;

a first coupling disposed along a first side of the first wall and the second wall, the first coupling attaching to the structure between the gap;

a second coupling disposed along a second side of the first wall and the second wall distal to the first side, the second coupling capable of selectively attaching to a cap covering the joint;

a first seal member extending from the first wall in a direction distal to the second wall and intermediate the first coupling and the second coupling;

a second seal member extending from the second wall in a direction distal to the first wall and intermediate the first coupling and the second coupling; the weather seal bridging the gap with the first seal member contacting a side edge of the first glazing panel and the second seal member contacting a side edge of the second glazing panel,

wherein the first coupling is a first receiver and the structure has a tongue that inserts into the first receiver,

wherein the first seal member and the second seal member are a first fin and a second fin, respectively, the first fin extending from the first wall in a direction perpendicular thereto and distal to the second wall, and the second fin extending from the second wall in a direction perpendicular thereto and distal to the first wall,

further comprising at least one sealing bulb extending from the first wall proximate the second coupling, the sealing bulb having a hollow therein and capable of deforming when pressed into the gap,

wherein the at least one sealing bulb includes a first sealing bulb and a second sealing bulb, the first sealing bulb extending from the first wall in a direction perpendicular thereto and distal to the second wall, the second sealing bulb extending from the second wall in a direction perpendicular thereto, and distal to the first wall,

wherein the first sealing bulb and the second sealing bulb have a cross-section approximating an egg shape, with a first portion having a smaller diameter than a second portion, the first portions leading the first and second sealing bulbs into the gap before the second portions when the weather seal is installed in the gap, wherein the second coupling is a second receiver and further including an extension from a wall of each of the sealing bulbs, the extensions extending in a direction toward one another to define a split over the second receiver.

**7**. The weather seal of claim **6**, wherein the weather seal is made from an elastic material, the first receiver capable of deforming to a first position capable of receiving the tongue of the structure and resiliently returning to a second position interlocking with the tongue of the structure.

**8**. The weather seal of claim **7**, further including a first pair of inwardly directed prominences proximate the first receiver, a first prominence of the first pair extending from the first wall toward the second wall and a second of the first pair extending from the second wall toward the first wall, wherein the tongue of the structure has recesses on opposing sides thereof, the pair of prominences extending into the recesses when the tongue of the structure is inserted into first receiver in snap-fit relationship.

**9**. The weather seal of claim **8**, further including an elongated cap capable of covering the gap, the cap having a front wall with a tongue extending therefrom, wherein, the second receiver is capable of deforming to a first position receiving the tongue of the cap and resiliently returning to a second position interlocking with the tongue of the cap and further including a second pair of inwardly directed prominences proximate the second receiver, a first prominence of the second pair extending from the first wall toward the

second wall and a second prominence of the second pair extending from the second wall toward the first wall, wherein the tongue of the cap has recesses on opposing sides thereof, the second pair of prominences extending into the recesses in the tongue of the cap when the tongue of the cap is inserted into the second receiver in snap-fit relationship.

**10**. The weather seal of claim **9**, wherein the extensions form a shallow V shape in cross-section, the slit being positioned at a bottom of the V shape and being disposed over and in alignment with the second receiver.

**11**. The weather seal of claim **10**, further comprising a pair of inwardly extending guide beads in the first receiver for controlling the frictional interaction of the receiver with the tongue of the structure.

**12**. A glazing structure, comprising:

a glazing support member with a coupling member extending there from;

a pair of glazing panels attached to the glazing support member with a gap between the side edges thereof;

a weather seal inserted into the gap bridging between the pair of glazing panels, the weather seal having a first wall along the length thereof, a second wall extending next to the first wall along the length of the first wall, a web wall joining the first wall and the second wall, the first wall spaced from the second wall;

with a first coupling disposed along a first side of the first wall and the second wall, the first coupling attaching to the coupling member between the gap, a second coupling disposed along a second side of the first wall and the second wall distal to the first side, a first seal member extending from the first wall to the side edge of a first of the pair of glazing panels and a second seal member extending from the second wall to a side edge of a second of the pair of glazing panels, wherein the first seal member is a flexible arcuate fin and the second seal member is a flexible arcuate fin, the first seal member contacting the side edge of the first glazing panel proximate an end of the first seal member and the second seal member contacting the side edge of the second glazing panel proximate an end of the second seal member.

**13**. The glazing structure of claim **12**, wherein the first coupling and the second coupling are first and second receivers and the coupling member is a tongue that inserts into the first receiver

and wherein, the first wall and the second wall joined by the web wall form an H-shape in cross-section, and further comprising a pair of sealing bulbs having a hollow therein and capable of deforming when pressed into the gap, a first of the pair of sealing bulbs extending from the first wall in a direction perpendicular thereto and distal to the second wall, the second sealing bulb extending from the second wall in a direction perpendicular thereto, and distal to the first wall.

**14**. A glazing structure, comprising:

a glazing support member with a coupling member extending there from;

a pair of glazing panels attached to the glazing support member with a gap there between;

a weather seal inserted into the gap bridging between the pair of glazing panels, the weather seal having a first wall along the length thereof with a first coupling disposed along a first side, the first coupling attaching to the coupling member between the gap, a second coupling disposed along a second side of the first wall distal to the first side and a seal member extending from the first wall to at least one of the glazing panels, wherein the first coupling and the second coupling are first and second receivers and the coupling member is a tongue that inserts into the first receiver, the weather seal further comprising

a second wall extending next to the first wall along the length of the first wall, the first wall and the second wall joined by a web forming an H-shape in cross-section, wherein the seal member includes a pair of sealing fins, a first fin extending from the first wall in a direction perpendicular thereto and distal to the second wall, a second fin extending from the second wall in a direction perpendicular thereto, and distal to the first wall, and further comprising a pair of sealing bulbs having a hollow therein and capable of deforming when pressed into the gap, a first of the pair of sealing bulbs extending from the first wall in a direction perpendicular thereto and distal to the second wall, the second sealing bulb extending from the second wall in a direction perpendicular thereto, and distal to the first wall, wherein the first sealing bulb and the second sealing bulb have a cross-section approximating an egg shape, with a first portion having a smaller diameter than a second portion, the first portions leading the first and second sealing bulbs into the gap before the second portions when the weather seal is installed in the gap, further including an extension from a wall of each of the sealing bulbs, the extensions extending in a direction toward one another and meeting to define a split over the second receiver.

**15**. The glazing structure of claim **14**, further including an elongated cap capable of covering the gap, the cap having a front wall with a tongue extending therefrom, the tongue of the cap being received in snap-fitting relationship into the second receiver.

**16**. A method for sealing a gap between glazing panels, comprising the steps of:

(A) providing a structure for supporting at least two glazing panels adjacent to each other with a gap between, the structure having a coupling member extending into the gap;

(B) attaching the glazing panels to the structure;

(C) providing an elongated weather seal having a first coupling disposed along a first longitudinal side and a second coupling disposed along a second longitudinal side and a seal member extending in a generally perpendicular direction relative to the length of the weather seal, the weather seal having a penetrable barrier covering the second coupling;

(D) inserting the weather seal into the gap;

(E) interlocking the first coupling of the weather seal to the coupling member of the structure, the weather seal being held in position in the gap with the seal member bridging a width of the gap;

(F) providing an elongated cap with a front wall with a tongue extending therefrom;

(G) pushing the tongue of the cap into the second;

(H) interlocking the tongue of the cap with the second coupling.

**17**. The method of claim **16**, further comprising the step of penetrating the penetrable barrier of the weather seal prior to the step of pushing and deforming the second coupling prior to the step of interlocking.

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